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## **ABSTRACT**

The invention includes a method of determining a control input. Such a control input may be used to dictate an input to a system, in order to bring the system from one state to another. In a method according to the invention, a set of values may be determined. The values in the set may be a solution to each of (a) a jerk parameter equation, (b) a first constraint equation and (c) a second constraint equation. The set of values may be used to determine a corresponding transfer function. The transfer function may be coupled with a filter to provide an augmented transfer function. The augmented transfer function may then be used to act upon an input signal in order to produce a control input.